

111 W. 16th Avenue, Third Floor Anchorage, AK 99501 Phone (907) 563-0013 Fax (907) 563-6713 www.bristol-companies.com

MEMORANDUM

DATE: April 17, 2019

TO: Sophia Katchatag, Community Coordinator, Native Village of Shaktoolik

FROM: David Beiswenger, PE

RE: Shaktoolik Escape Route Lighting – Draft Submittal

Ms. Katchatag:

The purpose of this Memorandum is to summarize findings and provide Draft Design Drawings and Permit Applications for the Escape Route Lighting project in Shaktoolik, Alaska as outlined in the Shaktoolik IDIQ – Escape Route Lighting – Task Order #2 agreement dated January August 30, 2018.

DESIGN SERVICES

As shown on the Draft Design Drawings, included in Attachment A, the design includes ten (10) each shore-mounted navigation lanterns/lights and dayboards, approved by the United States Coast Guard (USCG), along the Shaktoolik River, and the replacement of one (1) lantern/light fixture and a new dayboard at the existing Brown Hill structure. The design of the navigation lights, dayboards, and support structures is based on information published by the USCG including the U.S. Aids to Navigation System guide and Commandant Notice 16500, and engineering experience and judgement.

The navigation light support structures consist of 3-inch Sch 40 piles, driven approximately six (6) feet below grade, with three (3) each "duckbill" earth anchors and guy-wires, driven approximately four (4) feet below grade, to resist pile movement. To assist with pile installation, small pits, approximately three (3) feet deep, may be dug. Any excavated material shall be stockpiled on a liner immediately adjacent to the excavation, then placed back in the excavations and hand compacted once pile installation is complete.

Construction shall generally consist of brush trimming, minor excavation and replacement, pile driving, and anchor installation as required for the new navigation lights. The project will include traveling to each of the sites (including Brown Hill), most likely by boat and then overland by foot, to install the navigation lights, dayboards, and associated support structures.

All construction materials, tools, and equipment are designed to be hand-carried. The lighting support structures will be prefabricated to limit the extent of field fabrication/fitting. Due to the remoteness of the light sites, all construction activities (brush trimming, pile driving, and anchor installation) will be accomplished by hand and may include portable, gas powered equipment.

Engineer's Estimate

The Engineer's Opinion of Cost below gives an overview of the estimated costs for materials, labor, equipment, and professional services for construction of the Escape Route Lights.

ENGINEER'S ESTIMATE SUMMARY						
DESCRIPTION	COST	NOTES				
Total Materials	\$34,000.00					
Total Labor	\$26,000.00	Local Labor				
Total Equipment	\$20,000.00					
Professional Surveyor	\$20,000.00	Initial Staking and Easement Finalization				
Administration/Overhead	10,000.00	10% of Contract				
PROJECT TOTAL	\$110,000.00					

The Professional Surveyor shall provide initial staking for the lights and easement finalization for access to the light sites. Prior to construction, the Surveyor shall travel to each of the sites with the local crew and/or a Native Village of Shaktoolik representative to mark the proposed light locations and to confirm they are on Shaktoolik Native Corporation land.

Engineer's Estimate Supplemental Information is included with this Memorandum as Attachment B; it provides detailed material costs, labor rates and costs, equipment costs, and proposed project management costs. All assumption used in the development of the Engineer's Estimate are included in Attachment B.

Anticipated Construction Schedule

The Anticipated Construction Schedule below shows the planned sequence of construction to install the new navigations lights. This schedule needs to be coordination with the Native Village of Shaktoolik.

Dependent on Construction Funding Availability – Anticipated Start Date (July 1, 2019)

SURVEY/EASEMENT SERVICES

Bristol subcontracted with SurvBase to perform general land title research utilizing BLM, BIA, and DNR Recorder's Office records, and to prepare a land status exhibit showing current lot configurations. This information is presented on the attached Draft Land Status Map included in Attachment A with the Draft Design Drawings. It identifies lands in general categories such as public, private, and private restricted.

As presented on the Draft Land Status Map, all of the lights will be constructed on land owned entirely by the Shaktoolik Native Corporation. A Final Land Status Map will be provided with the Final Submittal.

Once the lighting locations have been finalized with Shaktoolik, SurvBase will compare the lighting easement/lease locations with the land status mapping to assess property impacts. Once these impacts have been reviewed, SurvBase will prepare any parcel exhibits to be used in the acquisition of easements and/or leases for the required lands.

Prior to construction, it is recommended that the light locations presented in the plans be sited by a professional surveyor to make sure they are on Shaktoolik Native Corporation land.



PERMITTING SERVICES

An Agency Scoping/Request for Comments letter was submitted to relevant local, State, and Federal regulatory agencies on March 22, 2019. To date, we have received comments from USACE, USCG, and ADOT&PF requesting that we fill out permit applications for this project. Draft permit applications are included in Attachment C. The 30-day period for regulatory agency comments ends on April 23, 2019.

DRAFT REVIEW AND FINAL SUBMITTAL

At your convenience, we would like to schedule a telephonic review conference with Bristol and the Native Village of Shaktoolik to discuss this Draft Submittal. Per Task Order #2, upon completion of the Draft Submittal review conference and the 30-day comment period for regulatory agencies (which ends on April 23, 2019), we fill finalize the design and permitting documents and submit to the Native Village of Shaktoolik and regulatory agencies.

ATTACHMENTS

- Attachment A Draft Design Drawings
- Attachment B Draft Engineer's Estimate Supplemental Information
 - o Engineer's Estimate Summary
 - Materials Cost Estimate
 - o Labor and Equipment Cost Estimate
 - Labor Rates
- Attachment C Draft Regulatory Agency Permit Applications
 - o USACE Application for Department of the Army Permit (Form ENG 4345)
 - o USCG Private Aids to Navigation Application (CG-2554)
 - o FAA Notice of Proposed Construction or Alteration (FAA Forms 7460-1 and 7460-2)

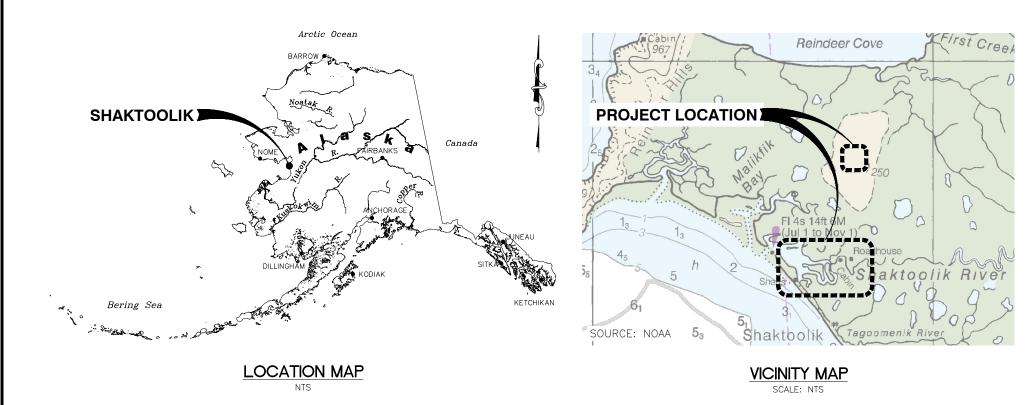
Cc: File



DRAFT DESIGN DRAWINGS

NATIVE VILLAGE OF SHAKTOOLIK SHAKTOOLIK ESCAPE ROUTE LIGHTING SHAKTOOLIK, ALASKA

DRAFT SUBMITTAL



	SHEET INDEX					
SHEET NO.	TITLE					
G1.0	TITLE SHEET, LOCATION AND VICINITY MAPS, AND SHEET INDEX					
G2.0	G2.0 GENERAL NOTES, ABBREVIATIONS, LEGEND, AND SPECIFICATIONS					
S1.0 DRAFT - LAND STATUS MAP						
C1.0	OVERALL SITE PLAN					
C2.0	LIGHTING LAYOUT PLAN					
C3.0	TYPICAL LIGHTING LAYOUT DIAGRAM					
C4.0	TYPICAL LIGHTING DETAILS					
C5.0	TYPICAL DAYBOARD DETAILS					

THIS PROJECT WILL CONSTRUCT TEN (10) EACH SHORE-MOUNTED NAVIGATION LANTERNS/LIGHTS, APPROVED BY THE UNITED STATES COAST GUARD (USCG), ALONG THE SHAKTOOLIK RIVER AND WILL REPLACE ONE (1) LANTERN/LIGHT FIXTURE AT THE EXISTING BROWN HILL STRUCTURE. THE PURPOSE IS TO HELP PROTECT THE COMMUNITY BY SAFELY LEADING RESIDENTS AWAY FROM MAJOR STORM EVENTS, UP THE SHAKTOOLIK RIVER, TO MUSTER AREAS WITH HIGHER GROUND.

3275 TTE					REVISIONS				38	$\overline{\mathbf{D}}$
Z2.	NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	1900	
38									% 32 No. 3	
K:\J 2190(1 2 2 3 3 3 3 3 3	
ing:									roject	
Jrawi Krefs									•	Phone (





SHAKTOOLIK ESCAPE ROUTE LIGHTING SHAKTOOLIK, ALASKA	
TITLE SHEET, LOCATION AND VICINITY MAPS, AND SHEET INDEX	

G1.0 SCALE: SHOWN DESIGNED: DWB CHECKED: IPP DRAWN:DWB DATE: APR 2019 SHEET 1 OF 8

SHEET NO.

GENERAL NOTES:

TO BE COMPLETED FOR FINAL SUBMITTAL

ABBREVIATIONS:

TO BE COMPLETED FOR FINAL SUBMITTAL

LEGEND:

TO BE COMPLETED FOR FINAL SUBMITTAL

SPECIFICATIONS:

- 1. MATERIALS TO BE COMPLETED FOR FINAL SUBMITTAL
- 2. INSTALLATION PROCEDURES TO BE COMPLETED FOR FINAL SUBMITTAL

		REVISIONS				REVISIONS				
37.	NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	1900	
006									32	
2									1 S C	
S: 3									ojec AF	
refs (4	





7	DRAFTSUBMITAL
2	DRAFTS

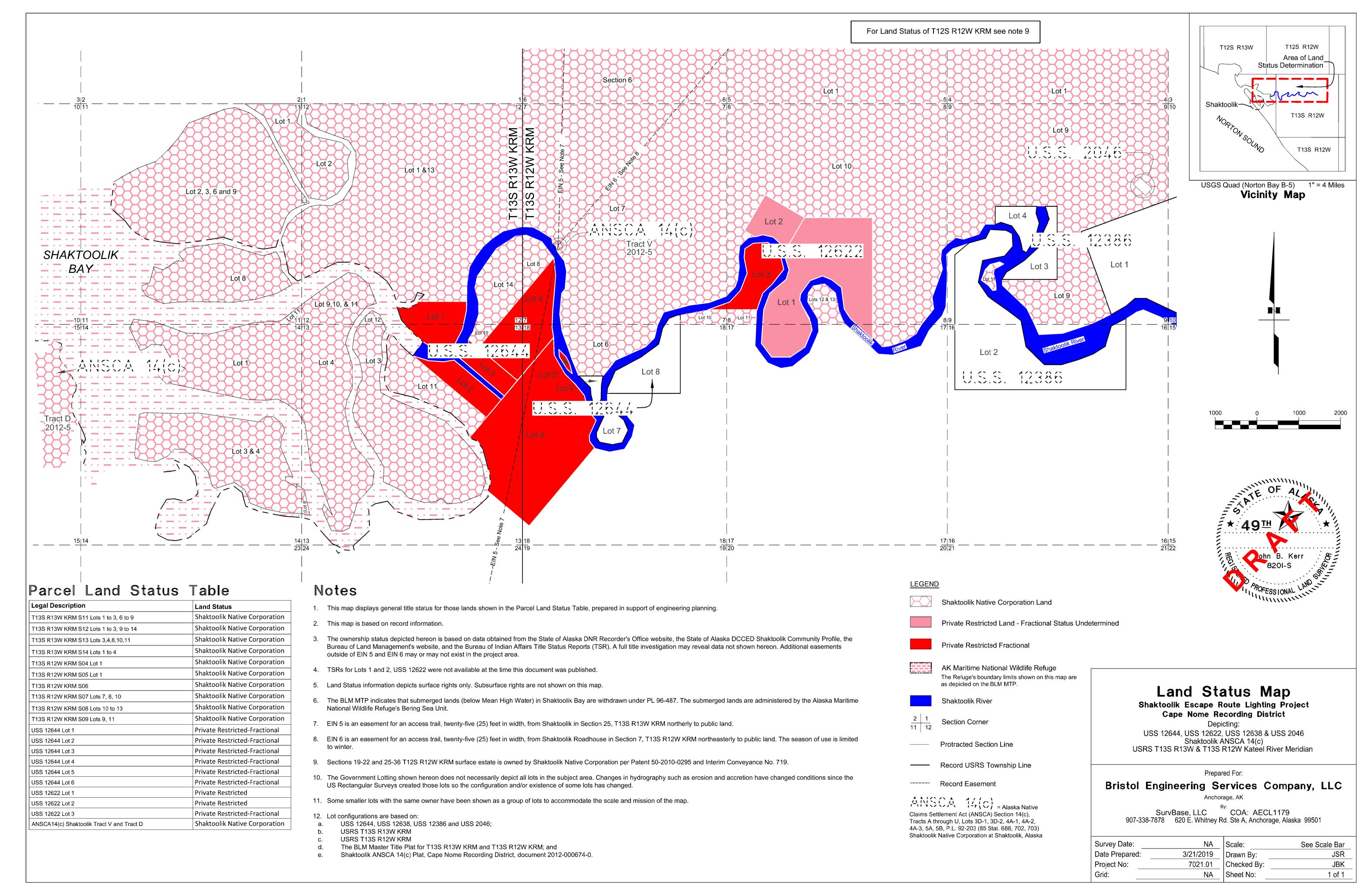
SHAKTOOLIK ESCAPE ROUTE LIGHTING SHAKTOOLIK, ALASKA **GENERAL NOTES, ABBREVIATIONS,**

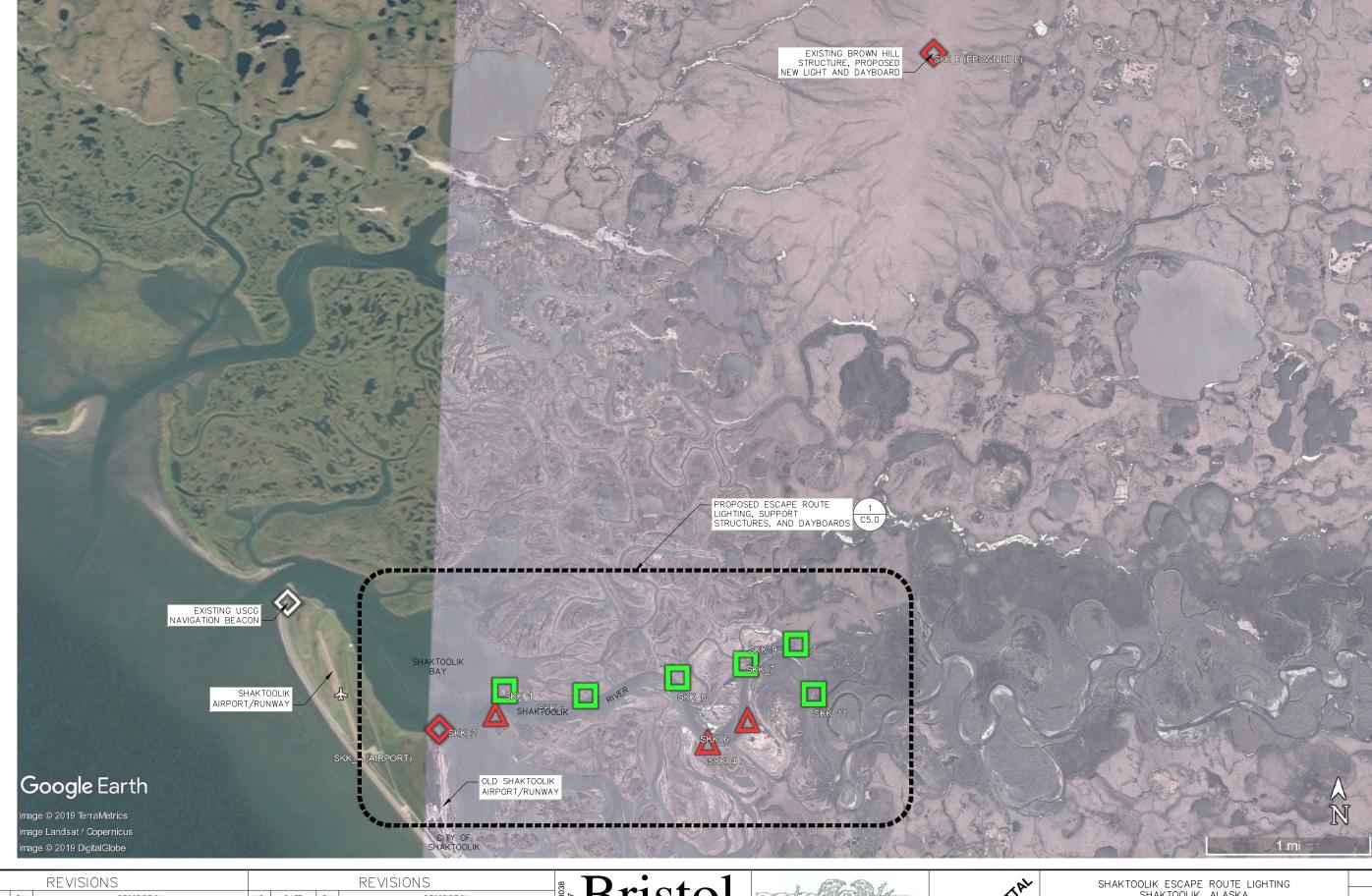
LEGEND, AND SPECIFICATIONS

G2.0

SCALE: SHOWN DESIGNED: DWB CHECKED: IPP DRAWN: DWB DATE: APR 2019 SHEET 2 OF 8

SHEET NO.





User: DBEISWENGER Apr 17, 2019 - 10:52am Drawing: K:\JOBS\32190037 SKK TO 2 ERL\ACAD-DESIGN\ESCAPE ROUT Xrefs: 32190037_TITLEBLOCK.DWG - Images: SKK LOGO_CROP.JPG

REVISIONS

NO. DATE BY DESCRIPTION

NO. DATE BY DESCRIPTION

OUT DATE BY DESCRIPTION

Bristol

ENGINEERING
SERVICES COMPANY, LLC
Phone (907) 563-0013 Fax (907) 563-6713



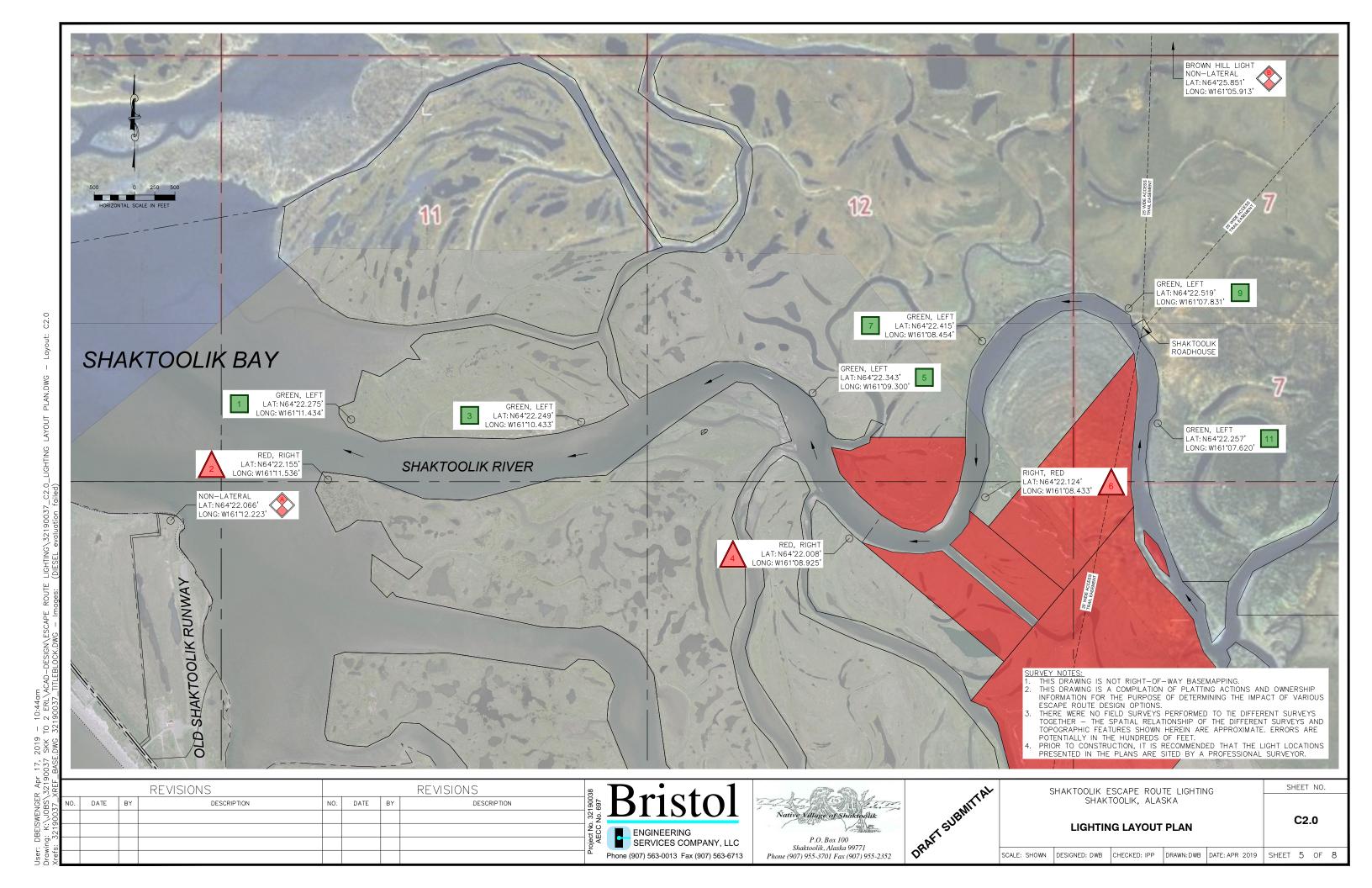
DRAFT SUBMITTAL

SHAKTOOLIK ESCAPE ROUTE LIGHTING
SHAKTOOLIK, ALASKA

OVERALL SITE PLAN

C1.0

SCALE: SHOWN DESIGNED: DWB CHECKED: IPP DRAWN:DWB DATE: APR 2019 SHEET 4 OF 8



- NOTES:

 1. CLEARING SHALL NOT OCCUR ON PRIVATE PROPERTY WITHOUT THE LAND OWNER'S WRITTEN CONSENT.

 2. TRIM AND CLEAR ALL BRUSH TO GROUND LEVEL, LEAVE ROOTS IN PLACE.

 3. CLEAR ALL BRUSH WITHIN A 10' RADIUS OF THE LIGHTS AND DAYBOARDS.

 4. CLEAR LINE OF SIGHT UP AND DOWN STREAM OF ALL LIGHTS AND DAYBOARDS.

- DAYBOARD, LIGHT, AND SUPPORT STRUCTURE, TYP. M- APPROX. LIMITS OF BRUSH TRIMMING, SEE NOTES *M* 10' MIN. APPROX. LIMITS OF BRUSH TRIMMING, SEE NOTES 20' MAX.

TYPICAL LIGHTING LAYOUT DIAGRAM

SCALE: NTS

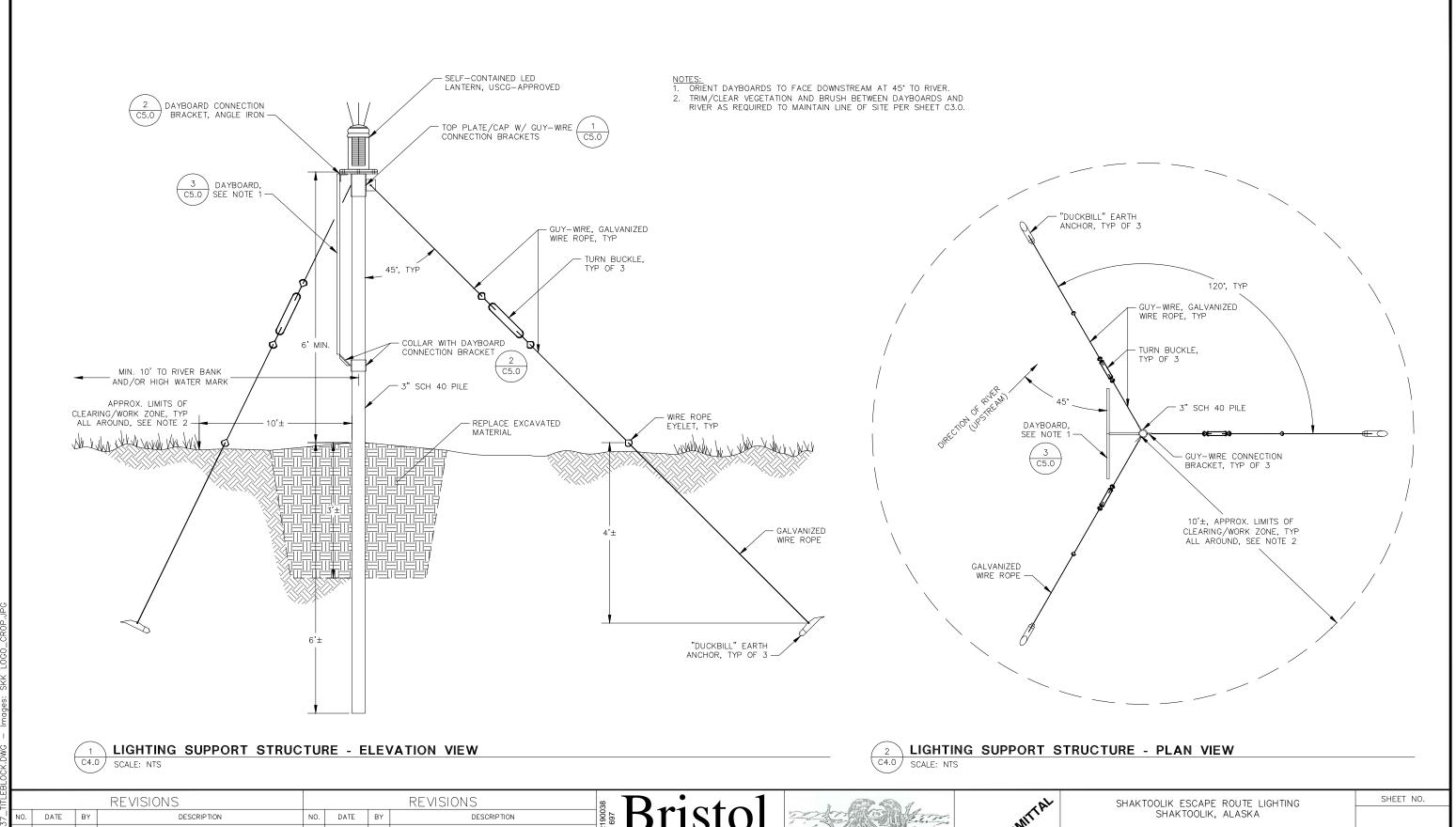
321	- DEVICIONS				REVISIONS				
BS\ 37_	NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	1900 697
K:\JOBS\ 190037_									. 32 No.
N									S C C
ing:									rojec
rawin refs:									[©] Pł





17.4	ITTAL
ž.	DRAFT SUBMITAL
	AFTS
	Ok.

ç	SHEET NO.							
	SHAKTOOLIK ESCAPE ROUTE LIGHTING SHAKTOOLIK, ALASKA							
TYI	(C3	.0					
: SHOWN	DESIGNED: DWB	CHECKED: IPP	DRAWN: DWB	DATE: APR 2019	SHEET	6	OF	



ENGINEERING

SERVICES COMPANY, LLC

Phone (907) 563-0013 Fax (907) 563-6713

P.O. Box 100

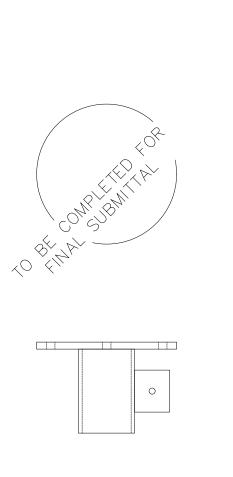
Shaktoolik, Alaska 99771 Phone (907) 955-3701 Fax (907) 955-2352 C4.0

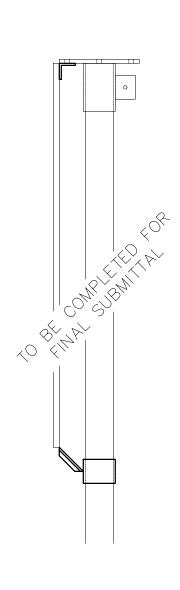
TYPICAL LIGHTING DETAILS

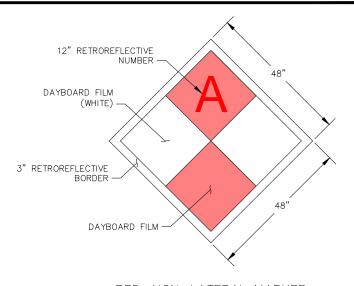
SCALE: SHOWN DESIGNED: DWB CHECKED: IPP DRAWN: DWB DATE: APR 2019 SHEET 7 OF 8

User: DBEISWENGER Apr 17, 2019 – 10:48am Drawing: K:\JOBS\32190037 SKK TO 2 ERL\ACAD-DESIGN\ESCAPE ROUTE LIGHTING\32190037_C3.0-C5

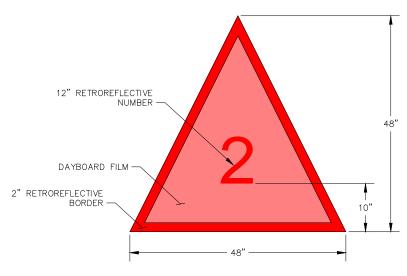




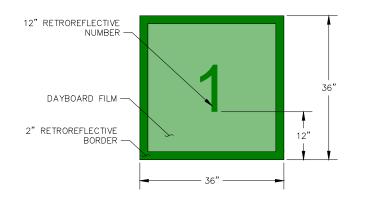




RED, NON-LATERAL MARKER



RED, RIGHT (UPSTREAM)



GREEN, LEFT (UPSTREAM)

TOP PLATE/PILE CAP DETAILS

SCALE: NTS

CONNECTION BRACKET DETAILS 2 CONNEC

3 DAYBOA SCALE: NTS

	DAYBOARD	DETAILS
--	----------	---------

	REVISIONS					REVISIONS			
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	1900:	
3								. 32 No.	
2								EC S	
								rojec	
<u>n</u>								1-	

. 32190038 No. 697	Bristol
을 있 당 옷 당 음	ENGINEERING
rojec	SERVICES COMPANY, LLC
	Phone (907) 563-0013 Fax (907) 563-6713



-	TA
-p2	T SUBMITA.
-	DRAFTSU
	ORA

•	S	SHEET NO.							
	_								
		TYPICAL D	AYBOARD	DETAILS			C5	.0	
	SCALE: SHOWN	DESIGNED: DWB	CHECKED: IPP	DRAWN: DWB	DATE: APR 2019	SHEET	8	OF	8

DRAFT ENGINEER'S ESTIMATE SUPPLEMENTAL INFORMATION

ENGINEER'S ESTIMATE SUMMARY

Bristol Engineering Services Company, LLC

Escape Route Lighting

Native Village of Shaktoolik

Description	Cost	Notes
Total Materials	\$ 34,000.00	
Total Labor	\$ 26,000.00	Local Labor
Total Equipment	\$ 20,000.00	
Professional Surveyor	\$ 20,000.00	Initial Staking and Easement Finalization
SUBTOTAL	\$ 100,000.00	
Admin./Overhead	\$ 10,000.00	10% of Contract
PROJECT TOTAL	\$ 110,000.00	

Page 1 of 4 4/17/2019

MATERIALS COST ESTIMATE

Bristol Engineering Services Company, LLC

Escape Route Lighting

Native Village of Shaktoolik

Description	Quantity	Unit	Un	it Cost	Subtotal	F	reight/Shipping	Total	Notes
Materials									
Self-Contained Lanterns	11	EA	\$ 1	1,625.00	\$ 17,875.00	\$	1,000.00	\$ 18,875.00	
3" x 12' SCH 40 Steel Pile	11	EA	\$	100.00	\$ 1,100.00	\$	1,000.00	\$ 2,100.00	
Fabricated Top Plate/Pile Cap	11	EA	\$	200.00	\$ 2,200.00	\$	200.00	\$ 2,400.00	
DuckBill Earth Anchors	33	EA	\$	15.00	\$ 495.00	\$	50.00	\$ 545.00	
Wire Rope	300	LF	\$	0.50	\$ 150.00	\$	100.00	\$ 250.00	
Misc. Nuts, Bolts, Fasteners	1	LOT	\$ 1	1,000.00	\$ 1,000.00	\$	50.00	\$ 1,050.00	
Prefabricated Dayboards	11	EA	\$	250.00	\$ 2,750.00	\$	500.00	\$ 3,250.00	
Tools									
Hand Saw/Bow Saw	2	EA	\$	20.00	\$ 40.00	\$	10.00	\$ 50.00	
Spade Shovel	2	EA	\$	30.00	\$ 60.00	\$	20.00	\$ 80.00	
Square Point Shovel	2	EA	\$	30.00	\$ 60.00	\$	20.00	\$ 80.00	
Pickaxe	2	EA	\$	40.00	\$ 80.00	\$	20.00	\$ 100.00	
Sledgehammer	2	EA	\$	50.00	\$ 100.00	\$	50.00	\$ 150.00	
Generator	1	EA	\$ 1	1,000.00	\$ 1,000.00	\$	100.00	\$ 1,100.00	
Cordless Power Tools	1	LOT	\$ 1	1,000.00	\$ 1,000.00	\$	50.00	\$ 1,050.00	
Pile Driver w/ Attachments	1	LOT	\$ 1	1,530.00	\$ 1,530.00	\$	100.00	\$ 1,630.00	
Chainsaw w/ Safety Gear	2	EA	\$	500.00	\$ 1,000.00	\$	50.00	\$ 1,050.00	
		_						20 555	
						M	ATERIALS TOTAL	\$ 33,760	

Page 2 of 4 4/17/2019

LABOR AND EQUIPMENT COST ESTIMATE

Bristol Engineering Services Company, LLC

Escape Route Lighting

Native Village of Shaktoolik

				LABOR		EQUIPMENT		
	DURATION FOREMAN LA			LABOR	LABOR	BOAT/SKIFF		
DESCRIPTION	(DAYS)	\$ 472	\$	354	\$ 354	\$ 1,000	TOTALS	NOTES
Preconstruction								
Inventory and Stage Materials, Tools, and Equipment	2	\$ 944	\$	708	\$ 708		\$ 2,360)
Survey Light Locations, Install Markers	2	\$ 944	\$	708	\$ 708	\$ 2,000	\$ 4,360)
SUB TOTAL		\$ 1,888	\$	1,416	\$ 1,416	\$ 2,000	\$ 6,720)
					\$ 4,720	\$ 2,000	\$ 6,720)
Site Work								
Site Preparation, Trim and Clear Brush	2	\$ 944	\$	708	\$ 708	\$ 2,000	\$ 4,360)
Excavate, Install Support Structures, Anchors, Dayboards, and Lights	14	\$ 6,608	\$	4,956	\$ 4,956	\$ 14,000	\$ 30,520)
Site Cleanup, Demob Equipment, Store Materials, Tools, and Equipment	2	\$ 944	\$	708	\$ 708	\$ 2,000	\$ 4,360)
SUB TOTAL		\$ 8,496	\$	6,372	\$ 6,372	\$ 18,000	\$ 39,240)
					\$ 21,240	\$ 18,000	\$ 39,240)
			LA	BOR TOTAL	\$ 25,960	EQUIP. TOTAL	. \$ 20,000)
						TOTAL	. \$ 45,960)
						CHECK	\$ 45,960	ОК
						CHECK	\$ 45,960	ОК

Page 3 of 4 4/17/2019

LABOR RATES Escape Route Lighting

		2019 Labor Rates							Rate										
Position/Description	Base Pay (\$/hr)	Overtime (\$/hr)	Fringe/Benefits (\$/hr)		\$/hr	4-hr Day			-hr Day	10-hr Day		12-hr Day							
Foreman	\$40.00	\$60.00	\$4.00	\$	44.00	\$	176.00	\$	352.00	\$	472.00	\$	592.00						
Laborer	\$30.00	\$45.00	\$3.00	\$	33.00	\$	132.00	\$	264.00	\$	354.00	\$	444.00						
Laborer	\$30.00	\$45.00	\$3.00	\$	33.00	\$	132.00	\$	264.00	\$	354.00	\$	444.00						
Admin/Support	nin/Support \$25.00 \$37.50		\$2.50	2.50 \$ 27.50		\$ 110.00		0 \$ 220.00		\$	295.00	\$	370.00						

Assumptions										
10 hr/day Typical Work Day (8 hr ST/2 hr OT)										
1.5	x base pay	Overtime Rate								
0.1	x base pay	Fringe/Benefits								

Page 4 of 4 4/17/2019

DRAFT REGULATORY AGENCY PERMIT APPLICATIONS

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved -OMB No. 0710-0003 Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whi.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413, Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNs/Index/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

and may be accessed at the following website: http://dpcld.defense.gov/Privacy	//SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx									
(ITEMS 1 THRU 4 TO B	E FILLED BY THE CORPS)									
APPLICATION NO. 2 FIELD OFFICE CODE	3. DATE RECEIVED 4. DATE APPLICATION COMPLETE									
(ITEMS BELOW TO BE	O BE FILLED BY APPLICANT)									
5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)									
First - Axel Middle - Last - Jackson	First - David Middle - Last - Beiswenger									
Company - Native Village of Shaktoolik	Company - Bristol Engineering Services Company, LLC									
E-mail Address - tc.skk@kawerak.org	E-mail Address - dbeiswenger@bristol-companies.com									
6. APPLICANT'S ADDRESS:	9 AGENT'S ADDRESS:									
Address- PO Box 100										
	Address- 111 West 16th Avenue, Third Floor									
City - Shaktoolik State - AK Zip - 99771 Country - USA	City - Anchorage State - AK Zip - 99501 Country - USA									
7. APPLICANT'S PHONE NOs. WAREA CODE	10. AGENTS PHONE NOs. w/AREA CODE									
a Residence b. Business c. Fax (907) 955-3701 (907) 955-2352	a Residence b. Business c. Fax (907) 793-9346 (907) 563-6713									
supplemental information in support of this permit application.	rny agent in the processing of this application and to furnish, upon request,									
SIGNATURE OF APPLIC	The state of the s									
NAME, LOCATION, AND DESCR	IPTION OF PROJECT OR ACTIVITY									
12. PROJECT NAME OR TITLE (see instructions) Shaktoolik Escape Route Lighting Project										
13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)									
Shaktoolik Bay, Shaktoolik River	Address									
15. LOCATION OF PROJECT	anned to the same of the same									
Latitude: •N 64.369242 Longitude: •W -161.192264	City - State- Zip-									
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)										
State Tax Parcel ID Municipality										
Section - Township -	Range -									

47	DIRECT	IONIC TO	THE	CITE
1/	UIRECI	LUND IL		2115

There are multiple sites. The project begins at the end of the old runway, northeast of the community of Shaktoolik, it continues across Shaktoolik Bay to the mouth of the Shaktoolik River, then up the Shaktoolik River to the Shaktoolik Roadhouse, and ends at Brown Hill.

18. Nature of Activity (Description of project, include all features)

The Shaktoolik Escape Route Lighting Project will construct ten (10) each shore-mounted navigation beacons and dayboards along the Shaktoolik River, and will replace one (1) lantern/lighting fixture and dayboard at the existing Brown Hill structure. The navigation beacon support structures will consist of 3-inch Sch 40 piles, driven approximately 6 feet below grade, with 3 each "duckbill" earth anchors and guywires, driven approximately 4 feet below grade, to protect against pile movement. The piles will extend approximately 6 feet above grade and will include a top plate/cap with guy-wire connection brackets. A self-contained (solar-powered) LED lantern, approved by the USCG, will be mounted to the top plate. In addition, USCG-approved retroreflective dayboards will be attached to each pile to identify the beacon number and provide location information with respect to the river. Construction shall generally consist of brush trimming, minor excavation, pile driving, material replacement, and earth anchor installation as required for the new navigation beacons. All construction activities (brush trimming, pile driving, and anchor installation) will be accomplished by hand and may include small, portable gas powered equipment.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Historically, Shaktoolik has been greatly affected by storms and rising sea levels. The Escape Route Lighting Project will help protect the community by safely leading residents away from major storm events, up the Shaktoolik River to muster areas with higher ground.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

To assist with pile installation, small pits will be dug (approximately 3 feet deep). Excavated materials will be stockpiled on a liner adjacent to the excavations. Excavated material will be placed back in the excavations and hand compacted once pile installation is complete.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type

Amount in Cubic Yards

Type

Amount in Cubic Yards

Type

Amount in Cubic Yards

In-situ soil - 6 CY excavated and replaced

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.001 acres total for excavation and material replacement at the navigation beacon locations.

OF

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Minor hand excavation and material replacement for hand-driven piles, no excavation for the hand-driven earth anchors, minimal brush trimming only as required for beacon installation, prefabricated materials to minimize field fabrication/fitting.

24. Is Any Portion of the	Work Already Complete?	Yes No IF YES, D	DESCRIBE THE COMPLE	TED WORK	
25. Addresses of Adjoin	ning Property Owners, Lessees	, Etc., Whose Property Ad	ljoins the Waterbody (If mor	re than can be entered here, please att	ach a supplemental list)
a Address- Shaktoolil	k Native Corporation, PO E	30x 46			
City - Shaktoolik		State - A	llaska	Z ip - 99711	
b. Address- Private Re	stricted Fractional (Native	Allotment), Multiple (1	Need additional inform	ation from SurvBase)	
City - Shaktoolik		State - A	laska	Zip - 99711	
c. Address- Alaska Ma	aritime National Wildlife R	efuge, 95 Sterling Hwy	#1		
City - Homer		State - A	laska	Zip - 99603	
d Address-					
City -		State -		Zip -	
e. Address-					
City -		State -		Zip -	
26. List of Other Certific	ates or Approvals/Denials rece		State, or Local Agencies for	or Work Described in This App	plication.
AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
U.S. Coast Guard	CG-2554 Private Aids				
FAA	Form 7460-1				
FAA	Form 7460-2				
* Would include but is no	ot restricted to zoning, building,	and flood plain permits			
27. Application is hereb	y made for permit or permits to I further certify that I possess t	authorize the work descri			
=					
	RE OF APPLICANT	DATE		JRE OF AGENT	DATE
	be signed by the person whe statement in block 11 has		. 5501 (257)	applicant) or it may be sig	ned by a duly
	01 provides that: Whoever,	150	*	· · · · · · · · · · · · · · · · · · ·	
	y falsifies, conceals, or cove entations or makes or uses a	1774 Till 179	(V)		
	hall be fined not more than				

ENG FORM 4345, FEB 2019 Page 3 of 3

DEPARTMENT OF HOMELAND SECURITY

U.S. Coast Guard

PRIVATE AIDS TO NAVIGATION APPLICATION

OMB Approval: 1625-0011 Expiration Date: 12/31/2017

	(See attached instructions and copy of Code of Federal Regulations, Title 33, Chap. 1, Part 66)													
	NO PRIVATE AID TO NAVIGATION MAY BE AUTHORIZED UNLESS A COMPLETED APPLICATON FORM HAS BEEN RECEIVED (14 U.S.C. 83; 33 CFR. 66. 01-5).													
	ACTION REQUESTED FOR PRIVATE AIDS TO NAVIGATION: A. ESTABLISH AND MAINTAIN B. DISCONTINUE C. CHANGE D. TRANSFER OWNERSHIP 2. DATE ACTION TO START: 07/01/2019 B. AIDS WILL BE OPERATED: A. THROUGHOUT THE YEAR B. TEMPORARILY UNTIL X. C. ANNUALLY 05/01/2019 TO 11/30/2019													
3. AIDS WILL	BE OPERATED:	A. TH	ROUGH	OUT TH	E YEAR	B. TEMPORAR	ILY UNTIL			x C. ANNU	JALLY 05/01/2019	TO <u>11/30/2019</u>		
4. NECESSITY	Y FOR AID (Continue in Bloc	k 8)				5. GENERAL L	OCALITY		6. AUTH	ORIZING PEI	RMIT FOR THIS STRUCTURE			
Escape Ro	oute Lighting					Shaktooli	k, Alaska		USACE	× PERMIT OR STA	TE PERMIT (Valid Perm	nit Number)		
FOR DISTR	RICT COMMANDERS ONLY	7				7	7. APPLICANT WILL F	ILL IN AP	PLICABLE	REMAINING C	COLUMNS			
		NO.	\Box	LIGH	IT		DEPTH			FOCAL	STRUCTURE	REMARKS		
LIGHT LIST NUMBER	NAME OF AID	OR LTR (7a)		FLASH LENGTH (7c)	COLOR (7d)	POSITION (7e)	OF WATER (7f)	CANDELA (7g)		PLANE HEIGHT (7h)	TYPE, COLOR, AND HEIGHT ABOVE GROUND (7i)	(See instructions) (7j)		
						N64 22.066'						4' Diamond Dayboard,		
		A	4s		White	W161 12.223'	N/A	106			Single Pile, 6'	Red and White		
		В	4s		White	N64 25.851' W161 05.913'	N/A	106			Brown Hill Existing Structure, Height Unknown	4' Diamond Dayboard, Red and White		
	2	4s		Red	N64 22.155' W161 11.536'	N/A	106	106		Single Pile, 6'	4' Triangle Dayboard, Red			
		4	4s		Red	N64 22.008' W161 08.925'	N/A	106			Single Pile, 6'	4' Triangle Dayboard, Red		
		6	4s		Red	N64 22.124' W161 08.433'	N/A 10				Single Pile, 6'	4' Triangle Dayboard, Red		
8. ADDITIONA	AL COMMENTS				1			1						
See suppl	lemental sheet for	: add	ditio	nal l	ights.									
9a. NAME AND OF THE AID(S)	O ADDRESS OF PERSON IN I	DIRECT	ΓCHARC	AT	WHOSE EX	ND ADDRESS OF PE (PENSE THE AID(S)	WILL BE MAINTAIN		WITH F	RESPECT TO	NT AGREES TO SAVE THE CO DANY CLAIM OR CLAIMS THA ED NEGLIGENCE OF THE MAI DAID(S).	T MAY RESULT ARISING		
9b. TELEPHO	NE NO.		,		Box 10	_			10c. D	ATE	10d. SIGNATURE AND TITLE	OF OFFICIAL SIGNING		
(907) 955				Sh	aktooli	k, AK 99771								
9c. E-MAIL AD														
	awerak.org						DATE ADDDOVED	01	ONIATUS	E (Decellers 1)				
	OR USE BY DISTRICT COMI				RECD		DATE APPROVED	SI	GNATURI	E (By direction	n)			
SERIAL NO.	CLASSIFICATION	1 OF A	JDS(S)	(CHART									
				1	LNM									

DEPARTMENT OF HOMELAND SECURITY

U.S. Coast Guard

			(5	See at	tached		ATE AIDS TO ns and copy of Co			_		. 1, Part 66)	
	NO PRIVATE	AID TO	•									EIVED (14 U.S.C. 83; 33 CFR. 6	66. 01-5).
	QUESTED FOR DS TO NAVIGATION:		EST	ΓABLISI	H AND IV	MAINTAIN [B. DISCONTINU	JE C. CHANGI	Ē □ D. ¬	TRANSFER OV	WNERS	SHIP 2. DATE ACTION TO ST	ΓART: 07/01/2019
B. AIDS WILL B	BE OPERATED:	A	. THF	ROUGH	HOUT TH	E YEAR	B. TEMPORARI	ILY UNTIL		x C.	. ANNU	JALLY 05/01/2019	TO 11/30/2019
I. NECESSITY	FOR AID (Continue in	n Block	8)				5. GENERAL L	OCALITY			NG PEF	RMIT FOR THIS STRUCTURE	
Escape Roi	ute Lighting						Shaktooli	k, Alaska		JSACE X PE	R STAT	AND/ PERMIT (Valid Perm	nit Number)
FOR DISTRI	ICT COMMANDERS ON	ΙLΥ	<u></u>				7	7. APPLICANT WILL F	ILL IN APPL				
LIGHT LIST NUMBER				FLASH PERIOD (7b)		COLOR	POSITION (7e)	DEPTH OF WATER (7f)	CAND (7g	DELA PLA g) HEI	FOCAL PLANE HEIGHT (7h) STRUCTURE TYPE, COLOR, AND HEIG ABOVE GROUND (7i)		REMARKS (See instructions) (7j)
			1	4s		Green	N64 22.275 W161 11.434'	N/A	106			ISINGTE PITE 6'	3' Square Dayboard, Green
			3	4s		Green	N64 22.249 W161 10.433'	N/A	106			Single Pile, 6'	3' Square Dayboard, Green
			5	4s		Green	N64 22.343' N161 09.300'	N/A	106			ISingle Pile, 6' I	3' Square Dayboard, Green
			7	4s		Green	N64 22.415' W161 08.454'	N/A	106			Single Pile, 6'	3' Square Dayboard, Green
			9	4s		Green	N64 22.519' W161 07.831'	N/A	106			Single Pile, 6'	3' Square Dayboard, Green
			11	4s		Green	N64 22.257' W161 07.620'	N/A	106			Single Pile, 6'	3' Square Dayboard, Green
	LCOMMENTS tal sheet.									·			
9a. NAME AND OF THE AID(S)	ADDRESS OF PERSO	IIO NI NC	RECT	CHARG	AT	WHOSE EX	ND ADDRESS OF PE XPENSE THE AID(S)) WILL BE MAINTAIN		WITH RESPE	ECT TO		
b. TELEPHON						D Box 10				10c. DATE		10d. SIGNATURE AND TITLE	OF OFFICIAL SIGNING
(907) 955					Sh	ıaktooli	lk, AK 99771						
oc. E-MAIL ADI cc.skk@kav	DRESS werak.org												
	R USE BY DISTRICT	COMM	ANDI	 ER	$\overline{}$	RECD		DATE APPROVED	SIG	SIGNATURE (By direction)			
SERIAL NO.	CLASSIFIC				-	CHART		-					
				_ ()				_					
	1				۱,	LNM	,	1					

OMB Approval: 1625-0011

Expiration Date: 12/31/2017

REMARKS									
DATE REFERENCE			ACTION AND REMARKS						
			_						
J F M	A M	J J	А	S O	N	D			
NAME OF AID									LIGHT LIST NO.
Shaktoolik Escape Route Lighting Project Privacy Act Statement									
Authority: Under 14 U.S.C. 81, the U.S. Coast Guard is authorized to establish aids to payingtion, 14 U.S.C. 83 prohibits establishment of aids to payingtion without permission of the U.S. Coast Guard, 33 CEP.									

Authority: Under 14 U.S.C 81, the U.S. Coast Guard is authorized to establish aids to navigation. 14 U.S.C 83 prohibits establishment of aids to navigation without permission of the U.S. Coast Guard. 33 CFR 66.01-5 provides a means for private individuals to establish privately maintained aids to navigation through application to the U.S. Coast Guard.

Purpose: To obtain approval to establish a private aid to navigation, applicants must submit CG-2554 (Private Aids to Navigation Application). Information about the private aid to navigation (type, color, geographic position), as well as the applicant's contact information is stored in the U.S. Coast Guard's Integrated Aids to Navigation Information System (I-ATONIS). I-ATONIS is the U.S. Coast Guard's comprehensive database for managing information about aids to navigation. I-ATONIS has user access controls in place to govern who may view or access information.

Routine Uses: Collecting the applicant's contact information is important because it allows the U.S. Coast Guard to contact the applicant should there be a discrepancy or mishap involving the permitted private aid to navigation. Certain discrepancies create hazards to navigation and must be responded to and corrected or repaired. The contact information is available to U.S. Coast Guard aids to navigation personnel and contact is only initiated if the private aid to navigation becomes discrepant or in need of repair.

Disclosure: Provision of the applicant's contact information is mandatory, as it will allow the U.S. Coast Guard to contact the owner should there be a discrepancy or mishap with the permitted aid to navigation. Failure to provide the required contact information will lead to disapproval of the private aid to navigation application.

CG-2554 (02/15) Page 2 of 5

Exilure To Provide All Requested	Information May Delay Processing of Your Notice	FOR FAA USE ONLY			
	ed Construction or Alteration	Aurometical Study Number			
Federal Aviation Administration	Total delicit of Attornation				
Sponsor (person, company, etc. proposing this action):	9. Latitude: 64 0 22	, <u>3.97</u> ,			
Attn. Name: Axel Jackson - Native Village of Shaktoolik	10. Longitude: 161 0 12	13.37			
Address PO Box 100	11. Datum: NAD 83 NAD 2	?7 Other			
Address TO Box 100	11. Nearest: City. Shaktoolik	State AK			
City: Shaktoolik State: AK Zip: 99771		·			
(007) 055 0050	13. Nearest Public-use (not private-use)	for Military Airport of Heilport.			
Telephone: (907) 955-3701 Fax: (907) 955-2352	14. Distance from #13. to Structure 2.0	000 ft			
2. Sponsor's Representative (if other than #1):	_	ast			
Attn.	of: 16 Site Flevetion (AMS/):	8 +			
Name: David Beiswenger, P.E Bristol Engineering Services	Company 17. Total Structure Height (AGL):	6 ft.			
Address: 111 West 16th Avenue, Third Floor	18. Overall Height (#16 + #17) (AMSL):	14 ft.			
	19. Previous FAA Aeronautical Stud	v Number (if analicable):			
City: Anchorage State: AK Zip: 99501		y Number (ir applicable).			
Telephone: (907) 793-9346 Fax: (907) 563-6713					
P. Matter of T. Name of T. H.	20. Description of Location: (Attach a precise site marked and any certified survey)				
3. Notice of: New Construction Alteration	Shaktaalik is lagated on the				
4. Duration: Permanent Temporary (months,					
5. Work Schedule: Beginning July 2019 End August 20	33 miles north of Unalaklee				
	Power Line G4 2520° North Latitude on	• •			
Landfill Weter Tank / Other Navigation Bea	Longitude (Section 23, T01				
7. Marking/Painting and/or Lighting Preferred:	Meridian). Shaktoolik is in				
Red Lights and Paint Dual - Red and Medium Intel	Pecording District and end	•			
White-Medium Intensity ☐ Dual - Red and high Intensity ☐ White - High Intensity ☐ Other	1.1 square miles of land. T	• • • •			
8. FCC Antenna Structure Registration Number (if applicable	Jacotod along the Shaktool				
6. For Alternia Structure Registration number (ii applicable	community.	,			
21. Complete Description of Proposal:		Farmer d Power (MAI)			
The Shaktoolik Escape Route Lighting Pro	iect will construct ten (10) each	Frequency/Power (kW)			
shore-mounted navigation beacons and da		and			
will replace one (1) lantern/lighting fixture a					
structure. The navigation beacon support s					
driven approximately 6 feet below grade, with 3 each "duckbill" earth anchors and guy-wires, driven approximately 4 feet below grade, to protect against pile movement.					
The piles will extend approximately 6 feet above grade and will include a top plate/cap					
with guy-wire connection brackets. A self-contained (solar-powered) LED lantern,					
approved by the USCG, will be mounted to the top plate. In addition, USCG-approved					
retroreflective dayboards will be attached to					
and provide location information with respect to the river. Construction shall generally					
consist of brush trimming, minor excavation, pile driving, material replacement, and					
earth anchor installation as required for the new navigation beacons. All construction					
activities (brush trimming, pile driving, and					
hand and may include small, portable gas	·				
Notice is required by 14 Code of Federal Regulations, part 77	pursuant to 49 U.S.C., Section 44718. Persons who knowing of \$1,000 per day until the notice is received, pursuant to 49 U	gly and willingly violate the notice			
I hereby certify that all of the above statements made by me are true	e, complete, and correct to the best of my knowledge. In a				
structure in accordance with established marking & lighting standa Date Typed or Printed Name and Ti	rds as necessary.	gnature			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

Paperwork Reduction Act Statement: This Information is collected to process obstruction date that is critical to flight, safety and is not confidential. Providing this information is mandatory for anyone proposing construction or afteretion that meets or exceeds the officers contained in 14 CFR, part 77. We estimate that the burden of this collection is an average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. A federal agency may not conduct or sponsor, and a person in end required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork, Reduction Act unless that calledation of information displays a currently valid DMB Control Number. The OMB control number associated with this collection is 2120-0001. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 independence Ave SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200

Form Approved OMB No. 2120-0001 Expiration Date: 10/31/2017

SUPPLEMENTAL NOTICE

and 6. I	Submission Instructions: For Advance Notice of Actual Construction or Alteration. Complete items 1, 2, 3A (1), 3A(2), and 6. If applicable, also complete items 4 and 5. Detach Part 1. Fold and tape at bottom. Mail to the FAA Regional Office for your area. Part 1A is provided for your file.								
	tment of Transportati		Notic	e of Actual Cons (Please Type or Pr	truction or Alteration int on this Form)				
1. Construction									
A. Type and Description of Construction B. Owner of Structure									
New Alteration					Native Village of Shaktoolik				
				2. Construction Le	ocation Height				
Coordinates (To hundredths of seconds, if known) Latitude Longitude					B. Location (City, State, include Street Address if any) Shalkasilk, Alcaka				
64	22	3.97	161	13.37	Shaktoolik, Alaska				
C. Construction Heights Total Height (Structure & Site) Above Mean Sea Level									
Site Eleva Structure	ation 8 Height 6	Ft, AMSL Ft. AGL	14	Ft. AMSL					
_	levation Determin	ed By	_	atum of coordinates	F. Name of Nearest Public-Use or Military Airport (include Distance and Direction from the Airport)				
					Shaktoolik Airport				
				3. Construction	Notifications				
A. Notific	ation	.a.d.s.c.a.d	The Control of the		B. Construction/Project				
	Safe	(Notice Is Criti ety FAR Part 7		Date		Date			
★ (1) Construction will ast 48 hrs. in adva	start (Submit at ince		July 2019	(1) Project Abandoned				
(2	(2) Estimated Completion August 2019								
) Structure Reach Submit within 5 day		ht	August 2019	(2) Construction Dismantled				
				4. Marking a	nd Lighting				
A. Marked B. Lighted Medium Intensity White Medium Intensity White Dual (Medium Intensity Dual (High Intensity None White & Red)									
				5. Antenna Requir	•				
A. Call S	A. Call Sign B. Frequency C. Date Applied for FCC Construction Permit D. Date Construction Permit Issued								
				6. Preparer's	Certification				
a ñ	A. Proponent's F	•			B, Construction Proponent				
Name: David Beiswenger, P.E.					Name: David Beiswenger, P.E.				
A Proponent's Representative Name: David Beiswenger, P.E. Address: Bristol Engineering Services Company, LLC 111 West 16th Avenue, Third Floor Anchorage, AK 99501 Tel. No.: (Include Area Code) (907) 793-9346 I hereby certify that the information provided is trace. Signature Title Civil Engine				y, LLC	Address: Bristol Engineering Services Company, LLC 111 West 16th Avenue, Third Floor Anchorage, AK 99501				
: 현 명 Tel. No.: (Include Area Code) (907) 793-9346					Tel. No.: (Include Area Code) (907) 793-9346				
I hereby certify that the information provided is true, complete, and correct to the best of my knowledge.									
Signature Title Date Civil Engineer						Date			
Notice	is required by	14 Code of	Federal Regu	lations, part 77 pur	suant to 49 U.S.C., Section 44718. Pers	ons who knowingly and			

SUBMIT WITHOUT DELAY

49 U. & C., Section 46301(a).